

CLAIMS

What is claimed is:

1. Manufacturing for face gears having an enveloping pinion in a mesh
5 engagement with a face gear where said enveloping pinion has less than one revolution of threads is being machined with plunging of rotating tool into an enveloping worm blank.
2. Manufacturing for face gears as recited in claim 1 where enveloping pinion has 180 degree or less of thread revolution.
- 10 3. Manufacturing for face gears as recited in claim 2 where after plunging, machined enveloping worm blank is split into two pinions.
4. Manufacturing for face gears as recited in claim 1 where enveloping pinion has 90 degree or less of thread revolution.
5. Manufacturing for face gears as recited in claim 1 where during
15 machining, said rotating tool has preliminary feeding in angular direction to axis of rotation of said enveloping worm blank followed by additional turning into desirable position for plunging.
6. Manufacturing for face gears as recited in claim 1 where said rotating tool has a helical form.
- 20 7. Manufacturing for face gears according with claim 1 where said rotating tool has a screw form.
8. Manufacturing for face gears according with claim 1 where machining is hobbing and said rotating tool is a hob.
9. Manufacturing for face gears according with claim 1 where machining
25 is rolling and said rotating tool is a roll die.
10. Manufacturing for face gears according with claim 1 where said rotating tool is an abrasive tool.
11. Manufacturing for face gears according with claim 1 where said rotating tool has cylindrical shape along its axis of rotation.
- 30 12. Manufacturing for face gears according with claim 1 where said rotating tool has convex shape along its axis of rotation.

13. Manufacturing for face gears according with claim 1 where said rotating tool has concave shape along its axis of rotation.
14. Manufacturing for face gears according with claim 1 where said rotating tool has ball shape.
- 5 15. Manufacturing for face gears according with claim 1 where said rotating tool has parabolic shape along its axis of rotation.
16. Manufacturing for face gears according with claim 1 where said rotating tool has taped shape along its axis of rotation.
- 10 17. Manufacturing for face gears having an enveloping pinion in mesh engagement with a face gear where said face gear is being machined with plunging of rotating tool having form of said enveloping pinion with 180 degree or less thread revolution.
18. Manufacturing for face gears according with claim 17 where said enveloping pinion has 90 degree or less thread revolution.
- 15 19. Manufacturing for face gears according with claim 17 where machining is hobbing and said rotating tool is a hob.
20. Manufacturing for face gears according with claim 17 where machining is rolling and said rotating tool is a roll die.

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